H-1190

Appl. No. 10/020,313
Amendment dated March 27, 2006
Reply to Office Action of December 28, 2005

REMARKS / ARGUMENTS

Claims 35-48 and 56-68 remain pending in this application. No claims have been canceled or added.

Priority

Applicant appreciates the Examiner's acknowledgment of the claim for priority and safe receipt of the priority document.

35 U.S.C. §112

Applicants will try to address each of the Examiner's comments in order. With respect to item (1) on page 3 of the Office Action, Applicants point out that the single physical input/output port corresponds to one of the four ports shown in Figs. 6 or 13. As stated in the specification, the number of components shown is not limited to the description in the specification (see paragraph [0155] in corresponding U.S. Publication No. 2002/0178143).

With respect to item (2) on page 3 of the Office Action, it appears that the Examiner misunderstands Applicants' intended meaning of port number. The present claims do not recite the assigning of different port numbers to a single physical input/output port. In the specification, the "port number" is not a number that is assigned to a single physical port and is not an identifier to specify a physical port.

The "port number" is included in an I/O request or an internet protocol compliant packet and is referenced when the storage controller makes the determination as to whether the I/O request is one related to block data or file data (see paragraph [0158]-[0160]).

With respect to items (3) and (4) on page 3 of the Office Action, it is unclear what the Examiner refers to by stating block-based I/O blocks and file-based I/O blocks. Such terms are not included in the present claims. According to the specification, there are two types of I/O requests or I/O data to be received by a storage system. One is block-based I/O (data) and the other is file-based I/O (request or data). File-based I/O (request or data) is intended to be executed in a file system, such as UNIX and NFS. The file-based I/O (request or data) is converted to a block-based I/O (data) by the file system (see paragraph [0081] of embodiment 1, paragraph [0128] of embodiment 2, and paragraph [0156] of embodiment 3). On the other hand, block-based I/O (data) is executed by accessing block devices using a RAID module (see paragraph [0070] of embodiment 1, paragraph [0120] of embodiment 2, and paragraphs [0150] and [0155] of embodiment 3).

35 U.S.C. §103

Claims 35-48 and 56-59 stand rejected under 35 U.S.C. §103(a)) as being unpatentable over Barrera et al (U.S. Pat. No. 6,748,448) in view of White (U.S. Pat.

No. 6,002,669) and further in view of Han et al (U.S. Pat. No. 5,991,542). These rejections are traversed as follows.

As it appears that the Examiner misunderstands Applicants' intention with respect to file based I/O and block-based I/O, the prior art applied under this section is not relevant to the pending claims. In particular, none of the cited art discloses a single port that receives both block and file I/O requests based on a first port number and a second port number, as claimed. In addition, none of the cited art discloses a controller that performs different operations based upon this port number.

For example, Barrera et al merely discloses a storage device controller connected to a physical port and a disk device. Barrera et al also discloses that a client can directly access the storage controller without going through a server (see Fig. 3). White et al merely disclose that a storage divides file data into a plurality of packets to send the file data via a network. Han et al merely disclose an organization of logical blocks in a storage volume having boot blocks, a volume bit map and contents of files stored in the volume (see column 4, lines 49-60 and Fig. 2). These references, whether taken individually or in combination, fail to raise a *prime facie* case of unpatentability. In fact, these references are only marginally relevant to the presently claimed invention. As such, it is submitted that the pending claims patentably define the present invention over the cited art.

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H-1190

Conclusion

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.

By _____
Shrinath Malur
Reg. No. 34,663
(703) 684-1120